

Patent Claims

1. Method of air dehumidification for oil-filled transformers, reactance coils and step switches for dehumidification of the air inducted into an oil expansion vessel, wherein the air humidity F_r is measured in the area between a granulate-filled housing of an air dehumidifier and the oil expansion vessel connected therewith, and wherein subsequently a comparison of the measured air humidity F_r with a predetermined limit value F_{\max} is undertaken and if the limit value is exceeded an electric heating device for baking the moisture-absorbing granulate in the interior of the housing is activated, characterised in that it is additionally detected whether an air flow is present between the housing (5) and the oil expansion vessel and if so which flow direction this air flow has and that the electric heating device is switched on only if either no air flow is present or this is directed outwardly from the oil expansion vessel.
2. Method of air dehumidification for oil-filled transformers, reactance coils and step switches for dehumidification of the air inducted into an oil expansion vessel, wherein the air humidity F_r is measured in the area between a granulate-filled housing of an air dehumidifier and the oil expansion vessel connected therewith, and wherein subsequently a comparison of the measured air humidity F_r with a predetermined limit value F_{\max} is undertaken and if the limit value is exceeded an electric heating device for baking the moisture-absorbing granulate in the interior of the housing is activated, characterised in that in addition the pressure P_u between the housing (5) and the oil expansion vessel is detected and compared with the external pressure P_a and that the electric heating device is switched on only if P_u is greater than or equal to P_a .
3. Air dehumidifier for oil-filled transformers, reactance coils and step switches for dehumidification of the air inducted into an oil expansion vessel, consisting of an upper flange, a lower closure cap and a housing disposed therebetween, wherein a moisture-absorbing granulate which is flowed through by the inducted air is arranged in the housing in a separate permeable granulate housing, wherein the granulate is a regeneratable medium which through heating in the saturated state is repeatably restorable to the moisture-accepting state, wherein the granulate housing has an electric heating device, wherein in addition a humidity sensor is provided which is arranged in such a manner that the inducted air already led through the housing flows around the sensor and wherein the humidity sensor controls the heating device, characterised in that in addition a relative

pressure sensor (29) is provided at the air dehumidifier in such a manner that the inducted air already led through the housing (5) on its path to the oil expansion vessel flows around the relative pressure sensor, that a pressure difference between the pressure P_u in the interior of the air dehumidifier and the pressure P_a outside the air dehumidifier is ascertainable by the relative pressure sensor (29) and that the heating device can be switched on only if P_u is greater than or equal to P_a .

4. Air dehumidifier according to claim 3, characterised in that the housing (5) consists of a material with a poor thermal conductivity, preferably glass, that the lower closure cap (2) consists of metal or another material with a good specific thermal conductivity and that the internal contour of the closure cap (2) is formed to be funnel-shaped.